

### **REMARKS**

This responds to the Office Action mailed on October 4, 2004.

By way of this amendment, claims 3-5, 9, 15, and 19-30 are canceled. Claims 1-2, 8, 12, 14, 16, and 18 are amended. New claims 31-45 are added. As a result, claims 1-2, 6-8, 10-14, 16-18, and 31-45 are now pending in this application.

### **Amendments to the Title**

The title has been amended to more accurately reflect the claimed subject matter by substituting "Assemblies and Systems" for "Assembly", and by deleting "Methods of Manufacture".

### **Amendments to the Abstract**

The Abstract has been amended by substituting "an embodiment" for "one embodiment". No new matter has been introduced through these amendments to the Abstract.

### **Amendments to the Specification**

On page 1, Applicant has updated the status of the related application.

In addition, Applicant has made several amendments to the specification by substituting "embodiments of the invention" or "inventive subject matter" for "invention" or "present invention"; by deleting certain instances of "present" and "invention"; and by deleting the sub-title "Conclusion". Applicant has also substituted "in an embodiment" for "in one embodiment".

In the paragraph beginning on page 6, line 17, the words "central or core region" have been substituted for "core" to provide antecedent support for the language "core region" in the claims, e.g. independent claims 1, 12, and 16.

No new matter has been introduced through these amendments to the specification.

### **Amendments to Claims 1-2, 8, 12, 14, 16, and 18**

Each of original claims 1-2, 8, 12, 14, 16, and 18 has been amended. No new matter has been introduced.

Independent claim 1 has been amended to be similar to claim 32 as published in Applicant's related U.S. Pat. No. 6,611,419.

Claim 2 has been amended by substituting the language "plurality of power lands and the second plurality of ground lands are positioned to be coupled to corresponding power and ground nodes of the substrate" for "wherein the first and second lands are positioned to be coupled to corresponding power supply nodes of the die, and wherein the third and fourth nodes are positioned to be coupled to corresponding power supply nodes of the substrate".

Claims 8, 14, and 18 have been amended by substituting "terminals" for "lands". Support may be found, for example, in the original written description on page 6, lines 9-11, and in original claim 1.

Independent claims 12 and 16 have been extensively amended. In general, the "interposer" recited in claim 1, as amended, has been substituted for the previous language directed to an "interposer".

The amendments to the claims are made to satisfy Applicant's preferences, not necessarily to satisfy any legal requirement(s) of the patent laws, and they are not intended to limit the scope of equivalents to which any claim element may be entitled.

#### **New Claims 31-45**

New claims 31-45 have been added to provide Applicant with additional protection to which Applicant is entitled. New claims 31-45 are supported by the original disclosure. No new matter has been introduced.

Dependent claim 31 recites a plurality of signal vias in a peripheral region of the interposer. Support may be found, for example, in FIG. 2 and on page 7, lines 6-13, of the original written description.

Dependent claim 32 recites that the interposer comprises a multilayer ceramic structure. Support may be found, for example, on page 14, lines 20-25.

Dependent claim 33 recites that at least one of the power vias does not go entirely through the interposer. Support may be found, for example, in FIG. 3 and in the corresponding written description.

Dependent claim 34 recites that at least one of the ground vias does not go entirely through the interposer. Support may be found, for example, in FIG. 3 and in the corresponding written description.

Dependent claim 35 recites that the plurality of power and ground vias is a relatively large number. Support may be found, for example, on page 6, lines 17-25 of the original written description.

Independent claim 36 is similar to claim 1, but it excludes some of the limitations of claim 1.

Dependent claim 37 is identical to claim 2, as amended.

Dependent claims 38-39 are identical to original claims 6-7.

Dependent claim 40 is identical to claim 8, as amended.

Dependent claims 41-45 are identical to new claims 31-35.

### **Objection to the Specification**

The specification was objected to. The Examiner requested that Applicant update the status of the Related Application, and the Applicant has accordingly done so.

Applicant respectfully requests that the objection to the specification be withdrawn.

### **Objection to Claim 2**

The Examiner objected to claim 2 and suggested that “third and fourth lands” be substituted for “third and fourth nodes”. The language “third and fourth nodes” has been deleted in favor of other wording, so Applicant respectfully requests that this objection be withdrawn.

### **Rejection of Claims 1-8 Under 35 U.S.C. §102(e) as Anticipated by Farooq**

Applicant respectfully asserts that the Examiner’s rejection of the claims under 35 U.S.C. §102(e) is unclear, in that the Examiner first stated that claims 1-8 were rejected as anticipated by Farooq et al. (U.S. 6,072,690). However, the Examiner subsequently rejected claims 8, 10-14, and 16-18, by referring a “Don” reference that is apparently not of record. Applicant respectfully requests that the Examiner clarify the grounds of rejection, and that the Don

reference be cited on a PTO-892 form if the Examiner continues to apply the Don reference to the claims.

As mentioned earlier, claims 3-5 have been canceled.

Applicant does not admit that Farooq is prior art and reserves the right to swear behind Farooq as provided for under 37 C.F.R. §1.131.

Farooq, as mentioned in col. 3, lines 54-60, discloses a multilayer ceramic capacitor with signal vias surrounded by an area containing low dielectric constant material disposed in a material having a high dielectric constant in the capacitor.

However, Farooq is not concerned with concentrating power and ground vias within a core region. Although Farooq discloses “voltage vias” (64 and 66, FIG. 3A) and “signal vias” (65, FIG. 3A), there is no disclosure within Farooq regarding providing a plurality of power and ground vias within a core region of an interposer, as now recited in each of the pending independent claims.

The rule under 35 U.S.C. §102 is well settled that “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2D 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP §2131.

As mentioned above, Farooq fails to disclose all of the structural elements recited in claim 1, as amended. For the above reasons, claim 1, as amended, should be found to be allowable over Farooq, and Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §102(e) as anticipated by Farooq be withdrawn.

Claims 2, 6-8, 10-11, and new claims 31-35, all of which depend from claim 1 and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

Independent claims 12 and 16, as amended, and the claims dependent therefrom, are also asserted to be allowable over Farooq for the reasons presented above.

New independent claim 36, and the claims dependent therefrom, are also asserted to be allowable over Farooq for the reasons presented above.

### Additional Elements and Limitations

Applicant considers additional elements and limitations of the pending claims to further distinguish over the cited references, and Applicant reserves the right to present arguments to this effect at a later date.

### Conclusion

Applicant respectfully submits that claims 1-2, 6-8, 10-14, 16-18, and 31-45 are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Walter W. Nielsen (located in Phoenix, Arizona) at (602) 298-8920, or the below-signed attorney (located in Minneapolis, Minnesota) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 4 day of February, 2005.

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Signature